

I. AMENDMENTS TO SPECIFICATION AND FIGURES

In a telephone interview on February 6, 2006, the Examiner requested that paragraphs [0038] and [0039] be amended to clarify and correct certain reference numbers. The present amendments to the specification reflect the Examiner's suggested amendments. In that telephone interview the Examiner also requested that Figure 1 be amended to show explicitly the pin holder described in paragraphs [0038] and [0039] of the specification. Replacement figure 1 which is submitted herewith includes an insert which shows that the first electrode has an end piece that is terminated in a ceramic pin holder (shown as a solid black horizontal line at reference number 29).

II. REJECTION OF CLAIMS UNDER 35 U.S.C. § 103(a)

Claims 1-15, 17, 19-23, and 44-52 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 4,416,751, U.S. Patent No. 5,534,232, U.S. Patent No. 5,061,354, and/or U.S. Patent No. 4,731,515, in view of U.S. Patent No. 5,660,465, issued to Mason (hereinafter "Mason"). Applicants respectfully traverse.

Amended claims 1, 44 and 52 recite one or more pins mounted in a ceramic pin holder (or pin-array holder) and the planar surface of a conductive electrode which terminates in the ceramic pin holder (or pin-array holder). The references cited by the Examiner do not teach a ceramic pin holder. Mason teaches an apparatus for producing foamed cementitious products that includes a screw conveyor with mixing pins. Mason does not teach or suggest the use of a ceramic pin holder, as recited in amended Claims 1, 44 and 52. In the final Office Action, the Examiner attempts to address the fact that there is no teaching of ceramic pin holder in the cited references by stating, "as to the provision of the ceramic holder, the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have." In a telephone interview on February 8, 2006, the Examiner explained that his position was based, at least in part, on the belief that the material from which the pin holder was made was of no particular significance. Applicants respectfully disagree with the Examiner's position and submit that the ceramic pin holder adds a significant, meaningful and non-obvious limitation to the claims.

In the telephone interview on February 8, 2006, the Examiner suggested that Applicants submit a declaration from an inventor explaining that the ceramic pin holder acts as an electrical insulator, the inherent effect of which is to prevent arcing between the face of the first electrode and the face of the second electrode, thereby isolating the electrical discharges between the pins and the face of the second electrode. Applicants draw the Examiner's attention to the Declaration of Ferencz S. Denes which accompanies this communication (hereinafter "the Declaration"). In the Declaration, Professor Denes, an inventor on the present application, states that the ceramic pin (array) holder acts as an insulator that prevents electrolysis from developing and extinguishing the electrical discharges necessary to produce nanoparticles.

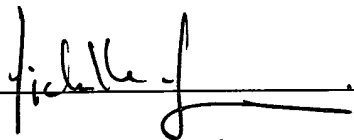
Thus, the Declaration establishes that use of a ceramic pin holder at the end of an electrically conducting electrode is not an insignificant material choice, but a meaningful element of the amended claims. The ceramic pin holder is not taught or suggested by any of the cited references, alone or in combination. Therefore, the cited references fail to provide a *prima facie* case of obviousness and Applicants respectfully request that the pending rejections be withdrawn.

In view of the foregoing remarks, Applicants respectfully submit that all of the claims remaining in the application are in condition for allowance and favorable action thereon is respectfully solicited.

Respectfully submitted,

Date April 20, 2006

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